by claudication, CLI, and aneurysmal disease treated with an Endologix abdominal endograft.

Methods: A retrospective review of all endovascular aorto-iliac aneurysms repaired with an Endologix device was perfomed at a single institution between January 2008 and April 2013. This revealed 51 patients who were treated with the Endologix device for aorto-iliac aneurysms who had coexisting aortoiliac occlusive disease. Patient demographics, procedural details, and clinical follow-up were reviewed.

Results: All nine (100%) of the patients had claudication and three (33%) had CLI. One patient presented with an aortic rupture and the remaining eight patients were elective. Successful deployment of the endovascular device was achieved in all nine (100%) patients. There was no 30-day mortality or reintervention within 1 year. Of the nine patients, three (33%) had complete iliac occlusions which were all crossed utilizing an Outback re-entry device. The remaining six (66%) patients all had iliac stenoses and two (22%) also had aortic stenoses. Preprocedural and postprocedural ABIs were available in 8 of 9 patients. Mean bilateral preprocedure ABI was 0.70 which increased to 0.86 postprocedure.

Conclusions: Significant coexisting arterial disease may be encountered in patients with aortic or iliac aneurysms. Identification of coexisting arterial diseases is essential to help tailor treatment for coexisting occlusive and aneurysm disease. The Endologix abdominal endograft has properties that perform well in this patient population in our single-center review.

Risk Factors for 30 Day Hospital Readmission in Patients Undergoing Treatment for Peripheral Artery Disease

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Objectives: Early hospital readmission among vascular surgery patients has become a focus for the restructuring of Medicare's reimbursement system; however, risk factors for these readmissions remain poorly characterized. We aim to identify factors associated with 30 day readmission after peripheral artery interventions.

Methods: Retrospective analysis of 175 consecutive patients discharged between 1/1/2011-7/31/2012 who underwent treatment for lower extremity peripheral artery disease, which included open and endovascular aortoiliac procedures, infrainguinal revascularizations, and amputations. Data on demographics, comorbidities, length of stay, type of operation performed, and functional status were acquired from the electronic medical record.

Table. Patient characteristics

	Nonreadmission group	*Readmission group*	P *value*
Total	133	37	
Age	69 0 ± 11.4	68.7 ± 11.4	.87
Male gender	67%	54%	.15
Race			.33
White	93 (67%)	23 (62%)	
Black	12 (9%)	5 (14%)	
Hispanic	15 (11%)	2 (5%)	
Asian	10 (7%)	6 (16%)	
Others	8 (6%)	1 (3%)	
Diabetes mellitus	69 (50%)	14 (38%)	.18
Hypertension	113 (83%)	33 (89%)	.33
Coronary artery disease	54 (39%)	14 (37%)	.86
Congestive heart failure	17 (12%)	4 (11%)	.8
Hyperlipidemia	78 (57%)	18 (49%)	.39
Stroke	19 (14%)	4 (11%)	.64
Chronic kidney disease	22 (16%)	12 (33%)	.02
End stage renal disease	13 (9%)	6 (16%)	.24
Chronic pulmonary obstructive disease	24 (17%)	7 (19%)	.83
Smoking	93 (67%)	21 (57%)	.23
Venous thromboembolism	8 (6%)	2 (5%)	.93
Atrial fibrillation	15 (11%)	5 (14%)	.65
Length of stay, days	7.74	7.65	.65
Urgency of operation	24 (17%)	13 (35%)	.02
Functional status at discharge			.08
Ambulatory	120 (87%)	28 (76%)	
Wheelchair-bound	14 (11%)	5 (13%)	
Bedbound	4 (3%)	4 (11%)	

Results: 37/175 (21%) patients were readmitted within 30 days of discharge; 7/37 (19%) readmissions were planned. There were no significant differences in demographic characteristics, comorbid conditions, length of hospital stay, or discharge functional status between the readmitted and nonreadmitted groups (Table). Readmitted patients were more likely to have undergone an urgent operation ($P = .02$). In a multivariate logistic regression model, urgency of operation (OR, 3.42; 95% CI, 1.35-8.67) and either chronic kidney disease or end stage renal disease (OR, 3.71; 95% CI, 1.39-9.91) were significantly associated with increased risk of 30 day readmission. Diabetes mellitus was associated with a lower risk of readmission (OR, 0.32; 95% CI, 0.12-0.83). The most common reasons for readmission were infection, either of the surgical site or index limb (18/37 = 49%) followed by persistent nonhealing wounds or rest pain in the index limb (11/37 = 30%). Graft failure requiring reintervention accounted for 3/37(8%) of readmissions.

Conclusions: Thirty-day readmission is frequent after peripheral artery interventions, with the majority of these related to the index limb. Urgent operative intervention and compromised renal function appear to be risk factors for early hospital readmission.

Lower Extremity Autogenous Vein Bypass for Critical Limb Ischemia Is Not Adversely Affected by a Failed Endovascular Procedure

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Objectives: It has been reported a failed endovascular intervention adversely affects results of lower extremity bypass (LEB). We reviewed rates of prior endovascular intervention in patients undergoing LEB with autologous vein for critical limb ischemia (CLI) to determine effects on graft patency, limb salvage and amputation free survival (AFS).

Methods: Review of consecutive autologous vein LEBs performed for CLI between 2005 and 2012 at a tertiary care academic medical center.

Results: Overall there were 311 autologous vein LEBs performed for CLI; 70% for tissue loss. TASC D or C lesions were present in 61% and 25%, respectively. The greater saphenous vein was used as a conduit in 83% and the distal target was infra-popliteal in 60%. 30-day mortality was 3.5%. One and 5-year primary patency was 61% and 45%. One and 5-year secondary patency was 88% and 65%, with 23% requiring an intervention to maintain patency. Five-year limb salvage was 90% and 5-year AFS was 49%.

Sixty patients (19%) had undergone a prior ipsilateral endovascular intervention (PEI) and 251 were felt to be unsuitable for an endovascular intervention (NPEI). PEI and NPEI patients had similar demographics and prevalence of atherosclerotic risk factors. One-year primary and secondary patency were 61% and 87% for PEI patients and 60% and 89% for NPEI patients (P = NS). Three-year secondary patency was 76% for PEI and 68% for NPEI (P = NS). Three-year limb salvage was 94% for PEI vs 89% for NPEI (P = NS). Three-year AFS was 53.6% for PEI vs 59.1% for NPEI (P = NS).

Conclusions: Overall operative mortality, patency rates and limb salvage for autologous vein LEB in CLI patients continue to be excellent in the endovascular era and are not necessarily affected by a prior failed ipsilateral endovascular procedure. Long-term survival remains poor in CLI patients requiring LEB.

Endovascular Therapy Is Effective Treatment for Focal Stenoses in Failing Infrapopliteal Grafts

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Objectives: To evaluate the efficacy of endovascular therapy in failing infrapopliteal bypass grafts to maintain patency and preserve limbs.

Methods: This is a retrospective review of endovascular procedures to preserve graft patency. Data were derived from a registry of catheter-based procedures for peripheral artery disease and review of records and angiographic images. Of 1554 arteriograms performed from 2006 to 2012, there were 44 interventions in 35 patients for failing bypass vein grafts to infrapopliteal target vessels. The first intervention for each patient was used in this analysis. Duplex ultrasound scanning (DUS) was routinely used within 30 days and at 3-6 month intervals for graft surveillance.

Results: Interventions were performed for recurrent symptoms of critical limb ischemia in 43% and for stenoses identified by DUS in 57%. Procedural techniques included cutting balloon angioplasty (74%), conventional balloon angioplasty (14%), stent placement (9%), and laser atherectomy and thrombectomy (3%). Procedural success was achieved in 34 of 35 cases (97%). There were no procedure-related complications,